

elevation belonging to the Alleghany range, in a coarse-grained sandstone, are eight remarkable impressions, all having the same dimensions, the same distance apart, and forming a continuous series in a slightly bent line. Each is of an ovoidal form, 13 inches long, 9 broad, and from 3 to 6 deep. The impression is deep and ovoidal before, but superficial behind, as though made by an animal with a long and flexible pastern.

Twenty-seven miles from Greensburgh, on the summit of Chesnut ridge, in a coarse-grained sandstone, are numerous imprints, as perfect as they are anomalous and remarkable. These imprints are of different kinds: the greatest number seem to have been made by *ruminant mammals*, as the feet were cleft so as to resemble those of the ox and deer, but much larger. They are of various sizes, and differ from most living types in having two hind hoofs, which made deep and vivid impressions from one to two inches behind the main track.

The length of the largest, including the posterior imprints, is 9 inches, breadth $5\frac{1}{2}$ inches.

The smaller vary from $4\frac{1}{2}$ to $5\frac{1}{2}$ inches in length, by $2\frac{1}{2}$ to $4\frac{1}{2}$ in breadth. The general form of these foot-marks is ovoidal, the largest portion being behind as well as the widest part of the cleft. The posterior impressions are each about the size of a walnut. The interval between each foot-mark is about $2\frac{1}{2}$ feet in the larger, and 18 inches in the smaller.

Besides these, and a few others which are identical or nearly so with some which I have already described on a former occasion, there are four or five huge imprints of a still more remarkable character than any that have heretofore met my eye. They are in a continuous line: each imprint is 13 inches long and 9 wide. The toes, which are five in number, are thick and very perfect. Four of these imprints are quite perfect, others are less so, and many are nearly obliterated. The average distance between each impression is 3 feet 7 inches, with the exception of the last two, which are 7 feet apart. This seems to indicate that there was once a track between these two, which has been defaced by the erosive action of the elements upon the rock during a series of ages.—*Proceedings of the Acad. Nat. Scienc. of Philadelphia.*

Description of a new species of Parus from the Upper Missouri.

By EDWARD HARRIS.

Parus septentrionalis. Young, in summer plumage.

Bill brownish black; short and stout. Iris dark brown. Feet grayish blue. Upper part of the head, chin and fore-neck dull black; the black of the head scarcely descending to the hind-neck, and that on the fore-neck hardly reaching to the breast. Cheeks and sides of the neck, a line running from the base of the bill under the eye and almost meeting on the hind-neck, white. Back grayish, slightly tinged with yellow. Quills and tail-feathers dark grayish brown, margined with pure white; secondaries conspicuously so. Lower parts gray-

ish white with an almost imperceptible tinge of yellowish under the wings.

Length $5\frac{7}{8}$; wing $2\frac{1}{6}$; tail $3\frac{3}{2}$ inches.

A single specimen of this bird was procured on the 26th of July on the Yellow Stone River, about thirty miles above its junction with the Missouri. It is evidently a bird of the season, with immature plumage, to which may be attributed the dullness of the black on the head and throat. On comparison of this bird with *P. carolinensis* and *P. atricapillus*, it will be perceived that, beginning with the smallest bird, the parts which are black decrease, and the white parts increase in size and intensity in ascending. In *septentrionalis* the outer web of the lateral tail-feather is entirely white, except a small portion near the base, where there is a slight tinge of gray next the shaft, and the quills, secondaries and all the tail-feathers are margined more broadly and with a purer white than in the other species.

I have given a table showing the comparative measurements of the three American species of this division of the genus *Parus* having black heads, which so closely resemble each other in voice, habits and markings; and have also added some measurements from a paper in the Archives of the Academy by M. de Selys-Longchamps, Corresponding Member of the Royal Academy of Brussels, extracted from their 'Bulletin,' vol. x. no. 7. I have reduced his measurements to English inches and decimals, and have given my own also in decimals for more ready comparison. It will be seen that his specimen from Iceland (*frigoris*) corresponds so nearly with our *atricapillus* as to render it probable that it is identical, while his *atricapillus* from Brisson is so near to Audubon's *carolinensis* as to render it almost certain that the description of *P. atricapillus* by the old authors was from our small southern bird. If this opinion be correct, our *carolinensis* should resume the name of *atricapillus*, and the larger bird be called *frigoris*, as suggested by M. de Selys-Longchamps.

The note of this bird is similar to *atricapillus*, but its voice more liquid, and less harsh and querulous in the utterance. Bill longer and stouter.

	Length.	Wing.	Tail.	Length.	Wing.	Tail.
Parus Carolinensis	$4\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{8}$ or	4.250	2.500	2.375
— atricapillus	$5\frac{1}{8}$	$2\frac{1}{6}$	$2\frac{9}{16}$	5.125	2.687	2.562
— septentrionalis (Nob.) ...	$5\frac{7}{8}$	$2\frac{3}{8}$	$3\frac{3}{2}$	5.875	2.812	3.093
— atricapillus (Briss.) } from the paper of M.				4.794		2.397
— frigoris				5.149		2.663

It will be seen by the above table, that while in each of the old American species the *wing* is .125, or $\frac{1}{8}$ th of an inch longer than the *tail*, in the new bird the *tail* is .281, or nearly $\frac{3}{10}$ ths of an inch longer than the *wing*: compared with *atricapillus*, the total length is greater by $\frac{3}{4}$ ths of an inch, the wing by $\frac{1}{8}$ th, and tail by $\frac{1}{2}$ or more than half an inch.

The colours in this immature specimen are only to be depended upon as showing the much greater development of the white and smaller extent of the black markings than in the other species. For the sake of more easy reference, the description has been made par-

allel with those of Audubon in his 'Synopsis.' I would propose as an appropriate English name for this bird, the "Long-tailed Black-cap Titmouse."—*Ibid.*

Red Colour of the Blood in Planorbis imbricatus.

By M. DE QUATREFAGES.

In examining by transmitted light *Planorbis imbricatus*, M. de Quatrefages has perceived that this little mollusk, very common in the soft water of the environs of Paris, has red-coloured blood. With a weak magnifying power the liquid is seen to fill the cavities of the pericardium and of the ventricle, and at moments to colour the general cavity of the whole body on its lower surface. M. de Quatrefages has not seen any distinct globules in this liquid. Other specimens, of a very small size, have colourless blood. M. de Quatrefages presumes that these are the young of the *P. imbricatus*, the blood of which acquires its characteristic tint only with age; and he remarks that if this conjecture is verified by observations which he intends to continue, it would be exactly the same with these mollusks as with the *Annelides*.—*Institut*, Jan. 7, 1846.

INDIAN SPECIES OF PAPHILIO.

To the Editors of the Annals of Natural History.

Brixton, May 18th, 1846.

GENTLEMEN,—Having been informed by Mr. Westwood that he had written to Dr. Erichson on the subject of my comments upon his Report on Entomology for 1842, and having been led to expect that an early answer would be received, I delayed replying to Mr. Westwood's communication in your January number.

From what I have lately heard from Mr. Westwood, it does not appear that he has now much expectation of a speedy reply, in fact that it may be deferred to the Greek calends, or may perchance have fallen on the road,

Lassaque facta viâ, lassaque facta mari;

and there lies waiting strength to continue its journey.

This being the case, I must decline to delay any longer a re-assertion of my belief that *Dr. Erichson is in nowise blameable for the errors I have pointed out in his Report, but was misled by erroneous information from England*; at the same time asserting the correctness of the Ray Society's version of the passages in question, the word Mr. Westwood would translate differently being commonly used by German entomologists to signify absolute specific identity, —a fact which I am surprised Mr. Westwood could overlook.

It is equally surprising to me that Mr. Westwood can assert that so acute an entomologist as Dr. Erichson could imagine, from my description of *P. Xenocles*, that it was identical with *P. Pollux*. I think it quite as probable for him to suppose that a minute description of a kittiwake compared with the short Linnæan description of the jackdaw proved their specific identity.

I must also beg leave to deny Mr. Westwood's right to assume, from the conversation he refers to, that my remarks were intended